AMENDMENTS TO THE DRAWINGS

The attached drawing sheets include changes to Fig 1A, 1B, 4B and 4D. In each figure, a reference number has been added, or changed.

REMARKS/ARGUMENTS

1. SUMMARY OF THE OFFICE ACTION

In the Office Action mailed January 14, 2005, the Examiner has stated that Applicants' declaration is defective because one of the inventors has signed the declaration in the wrong place. In addition, the Examiner has rejected claims 1 - 27 as being obvious, under the judicially created doctrine of double patenting, in view of U.S. Patent No. 6,742,082 to Lango et al. Finally claims 1 - 27 have been rejected under 35 U.S.C. 103(a) as being obvious in view of the combination of U.S. Patent No. 6,463,508 to Wolf et al. (hereinafter, "Wolf") and U.S. Patent No. 6,593,860 to Lai et al. (hereinafter, "Lai").

2. DEFECTIVE DECLARATION

In response to the Examiner's statement regarding the deficiency of the declaration, a newly signed declaration has been submitted herewith.

3. DOUBLE PATENTING REJECTION

In response to the Examiner's rejection of claims 1 - 27 under the judicially created doctrine of double patenting, a terminal disclaimer has been submitted herewith.

4. RESPONSE TO § 103 REJECTIONS

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on

applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claims 1 - 7 are not obvious in view of the combination of Wolf and Lai, because Wolf and Lai, considered singularly or in combination, do not disclose each and every limitation of claims 1 - 7.

Claim 1 states:

> A cache memory configured to store media data to be output as a media stream, the cache memory comprising:
>
> a session data file configured to store properties of the media stream, wherein the properties are selected from the class: encoding scheme and duration;
>
> a plurality of data object files, each data object file individually and directly accessible by a file system, each data object file comprising a data object configured to store a portion of the media data.

(Claim 1, emphasis added).

Applicants' invention generally relates to a cache memory for storing and streaming media data in various formats (e.g., using various streaming media protocols). Accordingly, claim 1 refers to a session data file for storing properties of each particular media stream. In particular, according to one embodiment of Applicants' invention, the encoding scheme used to encode each media stream is stored in the session data file.

Wolf discloses a proxy server for caching streaming media data. However, Wolf does not disclose or suggest that the streaming media data may be formatted according to various streaming media protocols. Consequently, Wolf does not disclose or suggest storing an encoding scheme in a session data file, as is recited in claim 1.

In the Office Action mailed January 14, 2005, the Examiner has suggested that "Wolf teaches a session data file configured to store properties of the media

stream." In particular, the Examiner has referenced lines 26 - 37 of column 2 in Wolf, which state:

> The present invention pertains to an improved method and apparatus for caching media streams at one or more proxy servers. In the current invention, blocks received for a media stream are grouped into segments by the proxy servers, where the cache admission and replacement policies attach a different caching value to different segments, taking into account the segment distance to the start of the media object. These policies may give preferential treatment to the beginning segments and may take into account other considerations such as the media object reference frequency, time since the last reference to the object, or its access time.

(Wolf, Col. 2, Lines 26 - 37).

According to Wolf, a caching value is assigned to each segment of a media stream. However, the caching value is related to a caching policy and is not a property of the media stream. For example, the media object reference frequency (i.e., a value representing the frequency with which a media object is requested) is not a property (e.g., encoding scheme) of the media stream.

Lai discloses a distributed transcoding system. According to Lai, the transcoding system includes several server computers and each server computer has a particular function. For example, one server caches media data, and another server streams media data. However, Lai does not disclose or suggest a cache memory for storing and streaming media data. In particular, Lai does not disclose or suggest a cache memory with a session data file for storing properties of a media stream, wherein the properties are selected from the class: encoding scheme and duration, as is recited in claim 1. Consequently, Applicants submit that claims 1 - 7 are not obvious in view of the combination of Wolf and Lai.

Claims 8 and 15 are not obvious in view of the combination of Wolf and Lai, because Wolf and Lai, considered singularly or in combination, do not disclose each and every limitation of claims 8 and 15.

Claim 8 states:

> A method for storing in a cache memory, media data to be output as streaming media, the method comprising:
>
> storing a first plurality of data objects in the cache memory, the first plurality of data objects configured to store a first plurality of data associated with a first encoding of the media data, wherein each data object of the first plurality of data objects is directly addressable in the cache memory via an associated object handle, and wherein each data object of the first plurality of data objects is configured to store a portion of data from the first plurality of data; and
>
> storing a second plurality of data objects in the cache memory, the second plurality of data objects configured to store a second plurality of data associated with a second encoding of the media data, wherein each data object of the second plurality of data objects is directly addressable in the cache memory via an associated object handle, and wherein each data object of the second plurality of data objects is configured to store a portion of data from the second plurality of data.

(Claim 8, emphasis added).

According to one aspect of Applicants' invention, a cache memory stores streaming media data in data objects configured to store streaming media data based on first and second encoding schemes. That is, the cache memory supports the storing and streaming of media data encoded in accordance with various streaming media protocols.

Wolf discloses a proxy server for caching streaming media data. However, Wolf does not disclose or suggest support for caching media data that has been encoded in accordance with various streaming media protocols. Specifically, Wolf does not disclose first and second data objects configured to store data associated with first and second encodings of media data.

Lai, discloses a distributed system for transcoding media data. However, Lai does not disclose or suggest a cache memory for caching media data that has been encoded in accordance with various streaming media protocols. Specifically, Lai does not disclose first and second data objects configured to store data associated with first and second encodings of media data. Consequently, Applicants submit that independent claims 8 and 15 are not obvious in view of the combination of Wolf and Lai. For the same reasons, dependent claims 9 - 15 and 16 - 20 are not obvious.

Claims 21 - 27 are not obvious in view of the combination of Wolf and Lai, because Wolf and Lai, considered singularly or in combination, do not disclose each and every limitation of claims 21 - 27.

Claim 21 states:

> A cache memory configured to store streaming media data, the cache memory comprising:
>
> code that directs a processor to receive streaming media data from a streaming media server, the streaming media data comprising a series of packets of media data, the packets of media data including header data and payload data;
>
> code that directs the processor to separate the header data from payload data;
>
> a session data file storing a portion of the header data, wherein the header data are selected from the group: encoding scheme, duration; and
>
> a plurality of data objects storing the payload data, wherein each data object of the first plurality of data objects is directly addressable in the cache memory via an associated object handle, and wherein each data object of the first plurality of data objects stores a portion of the payload data.

(Claim 21, emphasis added).

One aspect of Applicants' invention involves storing the header portion of a streaming media packet separate from the payload portion. Consequently,

claim 21 refers to separating the header portion from the payload portion of a packet of media data.

Neither Wolf, nor Lai disclose separating header data from payload data in a packet of media data. Consequently, Applicants submit that claim 21 is not obvious in view of Wolf and Lai. Because claims 22 - 27 depend upon independent claim 21, claims 22 - 27 are not obvious in view of Wolf and Lai for the same reason.

Claims 1 - 27 are not obvious in view of the combination of Wolf and Lai, because neither reference provides any suggestion or motivation to support the combination of Wolf and Lai.

Applicants' invention generally relates to a cache memory for storing and streaming media data in one of several streaming media formats, or protocols. One aspect of Applicants' invention is the ability to receive, store and stream media data in a wide variety of formats - all on a single computing device (e.g., a network-attached file server appliance). Accordingly, independent claims 1 and 21 refer to a session data file for storing the encoding scheme (e.g., a stream property) of each media stream stored in the cache.

The Examiner has suggested the following as a motivation for the combination of Wolf and Lai:

> It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the teaching of Lai into the invention of Wolf in order to reduce network latency and increase network transmission. Specific file would be sent to user with certain system requirements in a timely manner.

(Office Action mailed January 14, 2005).

Wolf discloses a proxy server for caching media streams. However, Wolf does not disclose or suggest that the proxy server includes a "session data file configured to store properties of [a] media stream [including an] encoding scheme and duration." In fact, Wolf does not disclose or suggest a proxy server capable of receiving, storing and streaming media data in various streaming

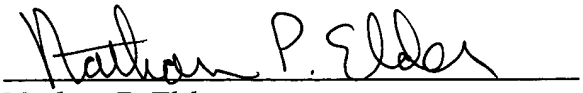
media formats. Wolf simply relates to and discloses a system and method for caching streaming media.

Lai, on the other hand, discloses a distributed on-demand media transcoding system. As such, Lai describes a network of server computers in which each server computer performs a particular and separate function. For example, in the distributed system disclosed in Lai, one server computer serves as a cache for streaming media, while other servers actually stream the media data. Because Lai is a distributed system, one skilled in the art would not be motivated to combine Lai with Wolf. Moreover, even if one skilled in the art did combine Lai and Wolf, the combination would not lead one to Applicants' invention as claimed. Consequently, in addition to the reasoning set out above, Applicants submit that claims 1 - 27 are not obvious in view of the combination of Wolf and Lai, because one skilled in the art would not be motivated to combine Wolf and Lai.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicants hereby request such an extension.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Dated: April 14, 2005



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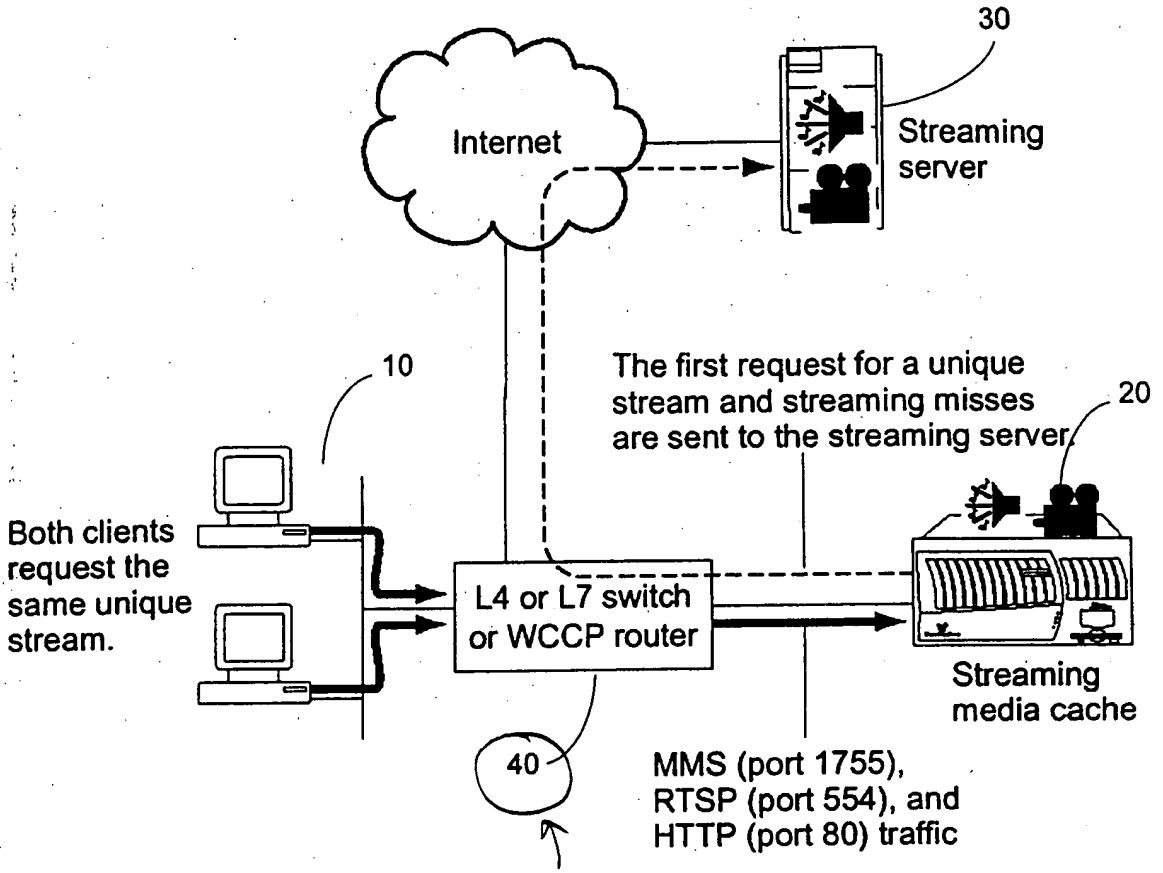

Reference Numbers Changed

FIG. 1A

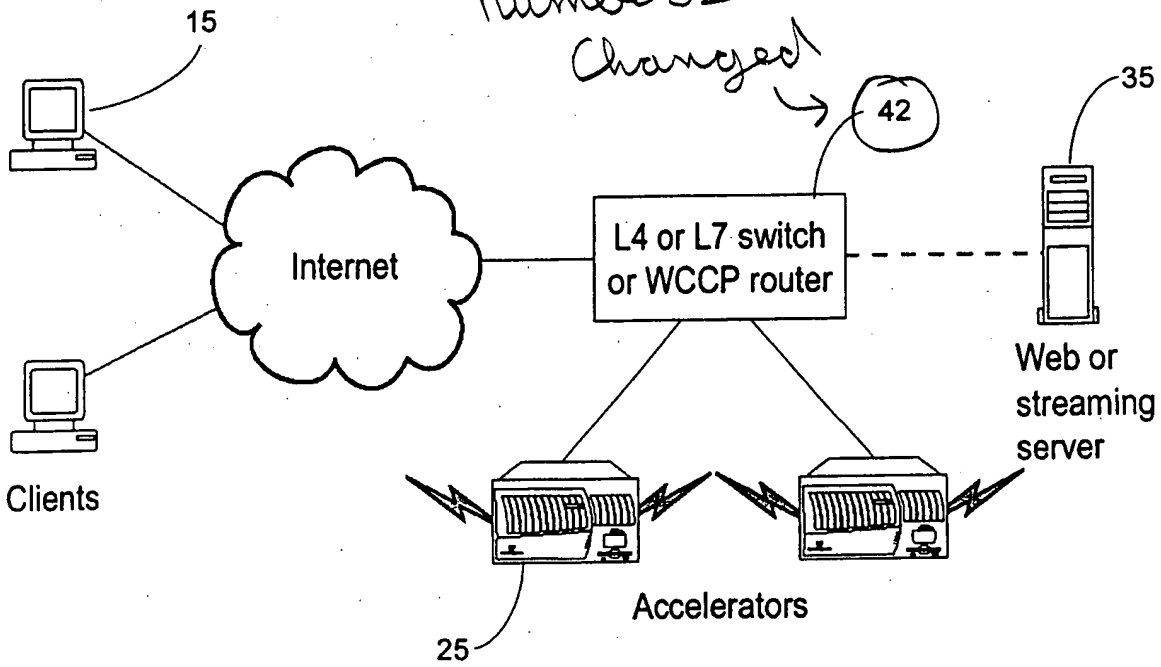

FIG. 1B

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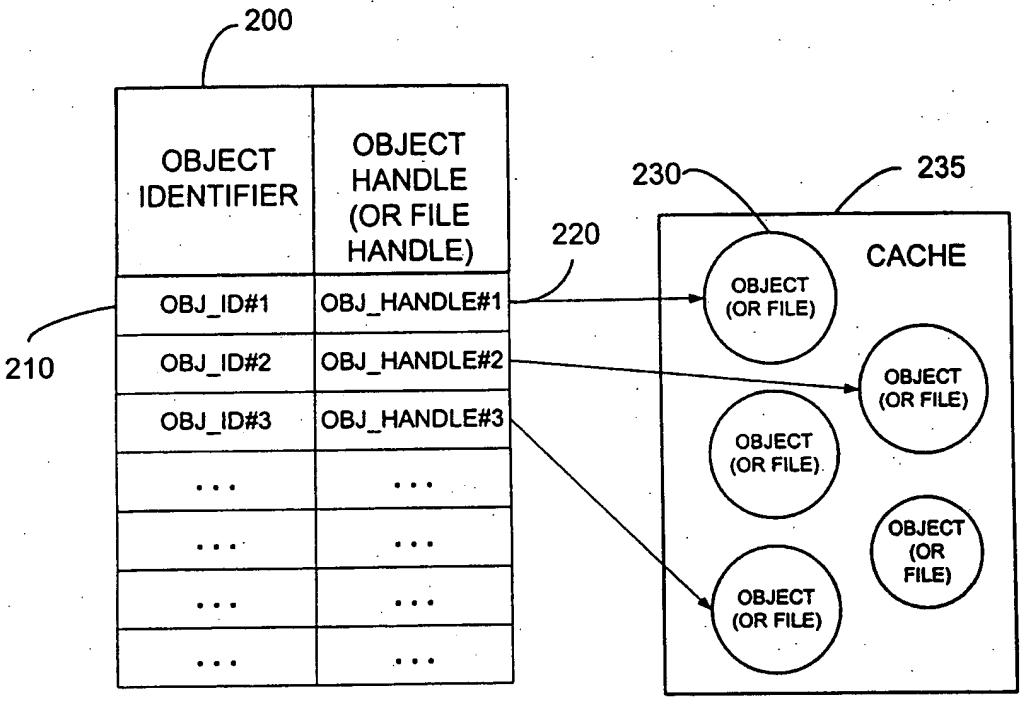

FIG. 4A

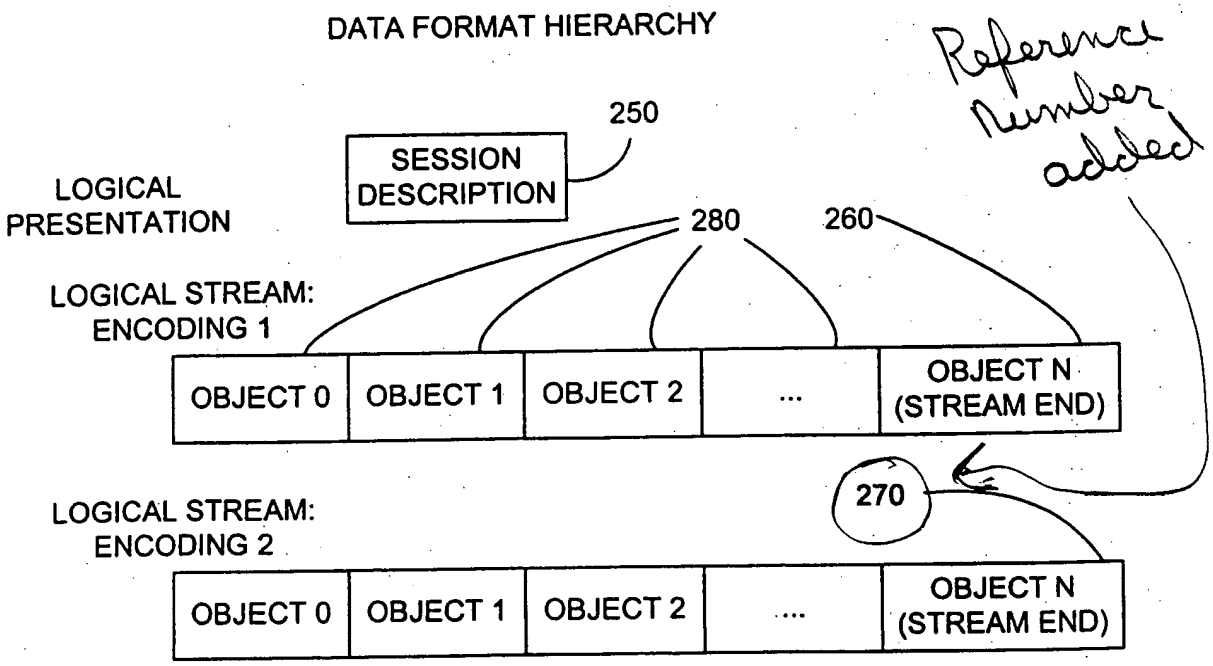

FIG. 4B

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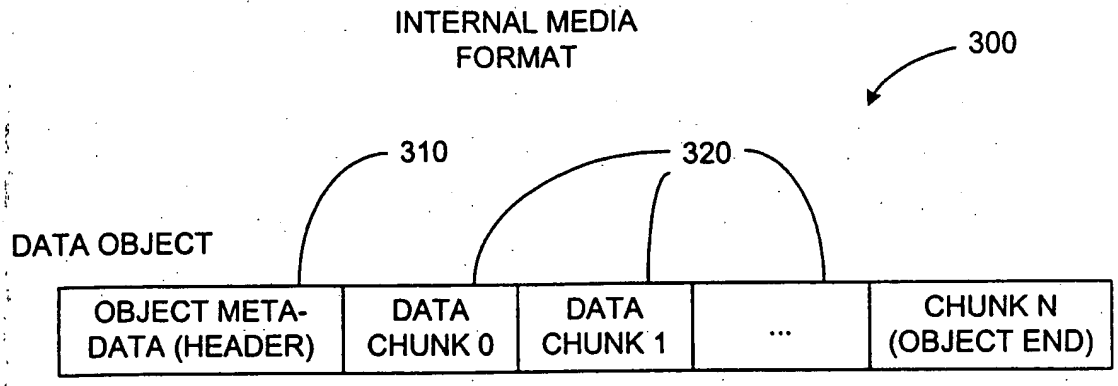

FIG. 4C

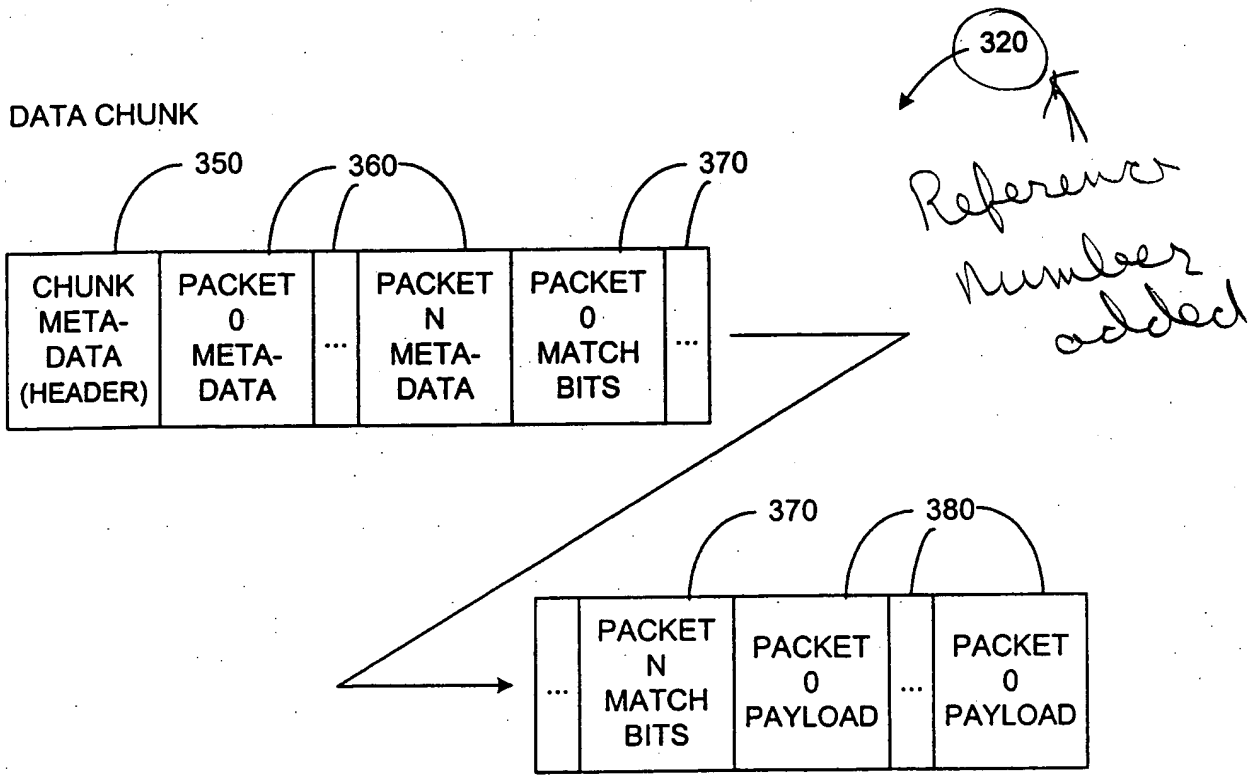

FIG. 4D